

**Meeting of the Central Valley Flood Protection Board
August 26, 2010**

Staff Report – Encroachment Permit

**Venetian Bridges Homeowners Association
Discharge Pipe Replacement, San Joaquin County**

1.0 – ITEM

Consider approval of draft Permit No. 18615 (Attachment B).

2.0 – APPLICANT

Venetian Bridges Homeowners Association.

3.0 – LOCATION

The project is located in Stockton along I-5.
(Calaveras River, San Joaquin County, see Attachment A)

4.0 – DESCRIPTION

Applicant proposes to replace the existing 12-inch-diameter steel discharge pipe with a new 14-inch-diameter steel pipe through the levee on the right (north) bank levee of the Calaveras River.

5.0 – PROJECT ANALYSIS

The applicant is proposing to replace the existing 12-inch-diameter steel discharge pipe with a new 14-inch-diameter steel pipe up and over the levee. The project is located approximately at levee mile 22.98, right (north) bank levee of the Calaveras River, Unit 15 of the San Joaquin County Flood Control and Water Conservation District. This project is initiated because the existing pipe is leaking and it has created a cavity at the waterside berm. Currently, the cavity area is protected with temporary safety fence. The existing buried pipe crossing the levee from a pump station on the waterside to a

point under the northern edge of Brookside Road on the landside will be removed. A new pipe will be replaced and the pipe trench will be backfilled with suitable materials.

5.1 – Hydraulic Analysis

In this project, no structures or objects will be installed within the channel which may impede the flood flow. A hydraulic model analysis is not required for this project. In addition, the invert of the new pipe will be above the design flood plane elevation of 15.5 feet, NAVD 88. Therefore, the project will not cause impacts to the flood control project if the site is restored to conditions prior to pipe leakage upon project completion.

5.2 – Geotechnical Analysis

The new pipe will be installed using cut-and-cover (trenching) method. The geotechnical concerns will be negligible if the pipe trench is backfilled with suitable materials and compacted to a minimum of 90 percent relative compaction, as measured by ASTM Method D1557-91 (see Special Conditions FORTY-ONE and FORTY-TWO, Attachment B).

6.0 – AGENCY COMMENTS AND ENDORSEMENTS

The comments and endorsements associated with this project, from all pertinent agencies are shown below:

- The U.S. Army Corps of Engineers (USACE) 208.10 comment letter dated August 16, 2010 has been received and is attached to draft Permit 18615 (Attachment B) as Exhibit A. USACE has no objection to the project and endorses the project with conditions stated in the letter.
- The San Joaquin County Flood Control & Water Conservation District (District) endorsement letter dated June 3, 2010 has been received and is attached to draft Permit 18615 (Attachment B) as Exhibit B. The District has no objection and endorses the project with conditions stated in the letter.

7.0 – CEQA ANALYSIS

Board staff has prepared the following CEQA determination:

The Board, acting as the CEQA lead agency, has determined that the project is categorically exempt from CEQA under a Class 2 Categorical Exemption (CEQA

Guidelines Section 15302) covering replacement of existing structures and facilities where the new structure will be located on the same site with the same purpose as the prior structures and facilities.

8.0 – SECTION 8610.5 CONSIDERATIONS

1. Evidence that the Board admits into its record from any party, State or local public agency, or nongovernmental organization with expertise in flood or flood plain management:

The Board will make its decision based on the evidence in the permit application and attachments, this staff report, and any other evidence presented by any individual or group.

2. The best available science that related to the scientific issues presented by the executive officer, legal counsel, the Department or other parties that raise credible scientific issues.

The accepted industry standards for the work proposed under this permit as regulated by Title 23 have been applied to the review of this permit.

3. Effects of the decision on the entire State Plan of Flood Control:

This project will have minimal impacts to the State Plan of Flood Control because no structures or objects will be installed within the channel.

4. Effects of reasonable projected future events, including, but not limited to, changes in hydrology, climate, and development within the applicable watershed:

The effects from changes in hydrology, climate and development within the applicable watershed will be minimal if the site is restored to conditions prior to pipe leakage upon project completion.

9.0 – STAFF RECOMMENDATION

Staff recommends that the Board determine the project to be exempt from CEQA and approve Permit No. 18615.

10.0 – LIST OF ATTACHMENTS

- A. Location Maps and Photos
- B. Draft Permit
- C. Construction plans prepared by the applicant's design consultant, Laurence Test & Associates

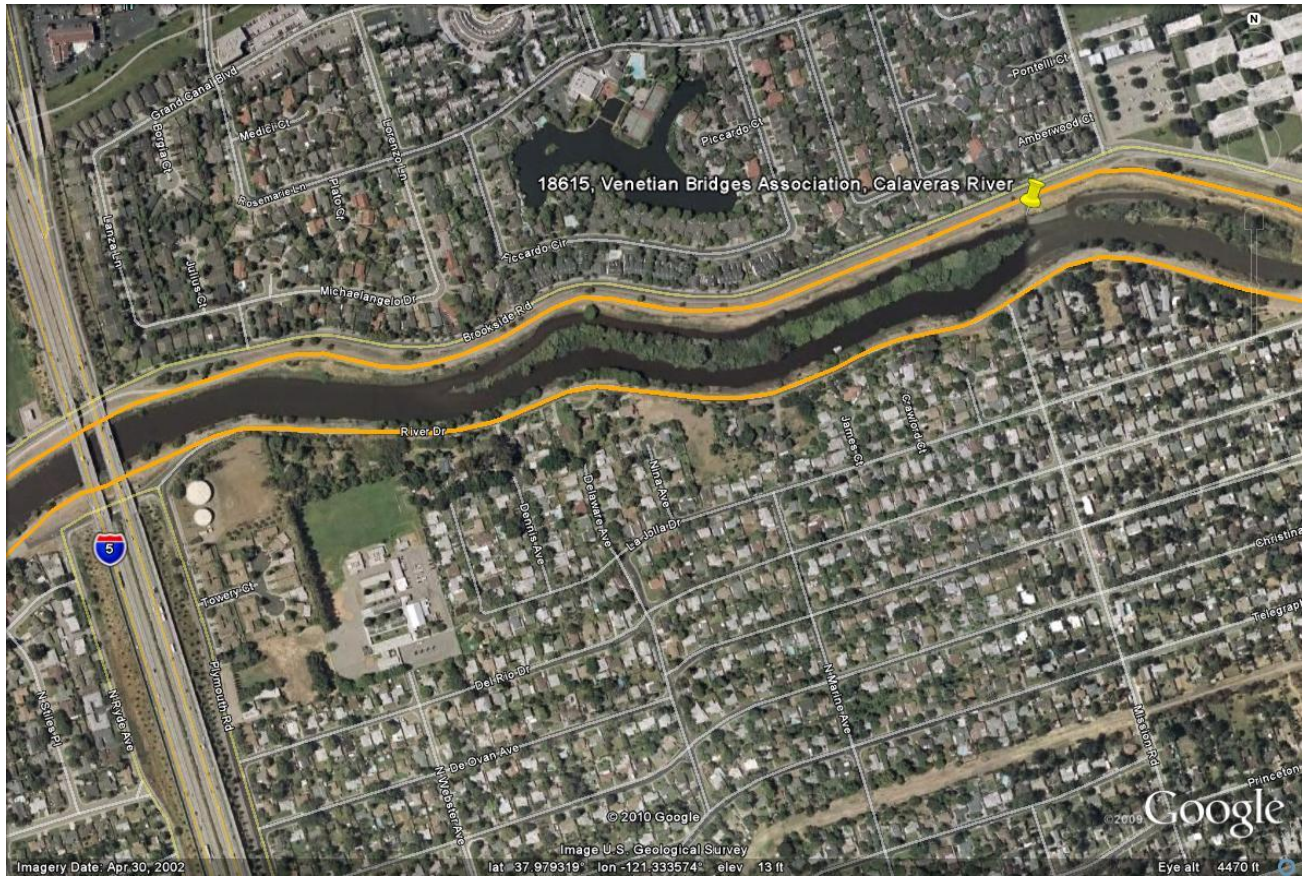
| | |
|-----------------------|----------------------------|
| Design Review: | Joo Chai Wong |
| Environmental Review: | Andrea Mauro |
| Document Review: | Ali Porbaha and Len Marino |

Vicinity Map



Source: Yahoo Maps

Project Location Map



Source: Google Earth



3/1/2010

Photo 1 Looking towards Calaveras River



3/3/2010

Photo 2 Looking towards Calaveras River



Photo 3 Pump station; looking downstream



Photo 4 Waterside berm; looking downstream



Photo 5 Levee waterside slope and crown



Photo 6 Levee waterside slope, crown, and landside slope (left to right)



Photo 7 Levee crown and landside slope (left to right)



Photo 8 Levee crown & landside slope (left to right)



Photo 9 Looking towards Calaveras River



Photo 10 Looking towards Brookside Road

DRAFT

STATE OF CALIFORNIA
THE RESOURCES AGENCY
THE CENTRAL VALLEY FLOOD PROTECTION BOARD

PERMIT NO. 18615 BD

This Permit is issued to:

Venetian Bridges Homeowners Association
P.O. Box 693706
Stockton, California 95269

To replace the existing 12-inch-diameter steel discharge pipe with a new 14-inch-diameter steel pipe through the levee on the right (north) bank levee of the Calaveras River. The project is located south of Brookside Road and approximately 0.7 miles east of I-5 in Stockton, California (Section 32, T2N, R 6E, MDB&M, San Joaquin County Flood Control and Water Conservation District, Calaveras River, San Joaquin County).

NOTE: Special Conditions have been incorporated herein which may place limitations on and/or require modification of your proposed project as described above.

(SEAL)

Dated: _____

Executive Officer

GENERAL CONDITIONS:

ONE: This permit is issued under the provisions of Sections 8700 – 8723 of the Water Code.

TWO: Only work described in the subject application is authorized hereby.

THREE: This permit does not grant a right to use or construct works on land owned by the Sacramento and San Joaquin Drainage District or on any other land.

FOUR: The approved work shall be accomplished under the direction and supervision of the State Department of Water Resources, and the permittee shall conform to all requirements of the Department and The Central Valley Flood Protection Board.

FIVE: Unless the work herein contemplated shall have been commenced within one year after issuance of this permit, the Board reserves the right to change any conditions in this permit as may be consistent with current flood control standards and policies of The Central Valley Flood Protection Board.

SIX: This permit shall remain in effect until revoked. In the event any conditions in this permit are not complied with, it may be revoked on 15 days' notice.

SEVEN: It is understood and agreed to by the permittee that the start of any work under this permit shall constitute an acceptance of the conditions in this permit and an agreement to perform work in accordance therewith.

EIGHT: This permit does not establish any precedent with respect to any other application received by The Central Valley Flood Protection Board.

NINE: The permittee shall, when required by law, secure the written order or consent from all other public agencies having jurisdiction.

TEN: The permittee is responsible for all personal liability and property damage which may arise out of failure on the permittee's part to perform the obligations under this permit. If any claim of liability is made against the State of California, or any departments thereof, the United States of America, a local district or other maintaining agencies and the officers, agents or employees thereof, the permittee shall defend and shall hold each of them harmless from each claim.

ELEVEN: The permittee shall exercise reasonable care to operate and maintain any work authorized herein to preclude injury to or damage to any works necessary to any plan of flood control adopted by the Board or the Legislature, or interfere with the successful execution, functioning or operation of any plan of flood control adopted by the Board or the Legislature.

TWELVE: Should any of the work not conform to the conditions of this permit, the permittee, upon order of The Central Valley Flood Protection Board, shall in the manner prescribed by the Board be responsible for the cost and expense to remove, alter, relocate, or reconstruct all or any part of the work herein approved.

SPECIAL CONDITIONS FOR PERMIT NO. 18615 BD

THIRTEEN: All work approved by this permit shall be in accordance with the submitted drawings and specifications except as modified by special permit conditions herein. No further work, other than that approved by this permit, shall be done in the area without prior approval of the Central Valley Flood Protection Board.

FOURTEEN: The permittee shall maintain the permitted encroachment(s) and the project works within the utilized area in the manner required and as requested by the authorized representative of the Department of Water Resources, San Joaquin County Flood Control and Water Conservation District, or any other agency responsible for maintenance.

FIFTEEN: The permittee shall contact the Department of Water Resources by telephone, (916) 574-0609, and submit the enclosed postcard to schedule a preconstruction conference. Failure to do so at least 10 working days prior to start of work may result in delay of the project.

SIXTEEN: The Central Valley Flood Protection Board, Department of Water Resources, and San Joaquin County Flood Control and Water Conservation District shall not be held liable for any damages to the permitted encroachment(s) resulting from flood fight, operation, maintenance, inspection, or emergency repair.

SEVENTEEN: The permittee may be required, at permittee's cost and expense, to remove, alter, relocate, or reconstruct all or any part of the permitted encroachment(s) if removal, alteration, relocation, or reconstruction is necessary as part of or in conjunction with any present or future flood control plan or project or if damaged by any cause. If the permittee does not comply, the Central Valley Flood Protection Board may remove the encroachment(s) at the permittee's expense.

EIGHTEEN: The permittee shall defend, indemnify, and hold the Central Valley Flood Protection Board and the State of California, including its agencies, departments, boards, commissions, and

their respective officers, agents, employees, successors and assigns (collectively, the "State"), safe and harmless, of and from all claims and damages related to the Central Valley Flood Protection Board's approval of this permit, including but not limited to claims filed pursuant to the California Environmental Quality Act. The State expressly reserves the right to supplement or take over its defense, in its sole discretion.

NINETEEN: The permittee is responsible for all liability associated with construction, operation, and maintenance of the permitted facilities and shall defend, indemnify, and hold the Central Valley Flood Protection Board and the State of California; including its agencies, departments, boards, commissions, and their respective officers, agents, employees, successors and assigns (collectively, the "State"), safe and harmless, of and from all claims and damages arising from the project undertaken pursuant to this permit, all to the extent allowed by law. The State expressly reserves the right to supplement or take over its defense, in its sole discretion.

TWENTY: The permittee should contact the U.S. Army Corps of Engineers, Sacramento District, Regulatory Branch, 1325 J Street, Sacramento, California 95814, telephone (916) 557-5250, as compliance with Section 10 of the Rivers and Harbors Act and/or Section 404 of the Clean Water Act may be required.

TWENTY-ONE: The permittee shall be responsible for repair of any damages to the project levee and other flood control facilities due to construction, operation, or maintenance of the proposed project.

TWENTY-TWO: If the project, or any portion thereof, is to be abandoned in the future, the permittee or successor shall abandon the project under direction of the Central Valley Flood Protection Board and Department of Water Resources, at the permittee's or successor's cost and expense.

TWENTY-THREE: Upon completion of the project, the permittee shall submit as-built drawings to: Department of Water Resources, Flood Project Inspection Section, 3310 El Camino Avenue, Suite LL30, Sacramento, California 95821.

TWENTY-FOUR: No construction work of any kind shall be done during the flood season from November 1 to April 15 without prior approval of the Central Valley Flood Protection Board.

TWENTY-FIVE: The permitted encroachment(s) shall not interfere with operation and maintenance of the flood control project. If the permitted encroachment(s) are determined by any agency responsible for operation or maintenance of the flood control project to interfere, the permittee shall be required, at permittee's cost and expense, to modify or remove the permitted encroachment(s) under direction of the Central Valley Flood Protection Board or Department of Water Resources. If the permittee does not comply, the Central Valley Flood Protection Board may modify or remove the encroachment(s) at the permittee's expense.

TWENTY-SIX: No excavation shall be made or remain in the levee section during the flood season from November 1 to April 15 without prior approval of the Central Valley Flood Protection Board.

TWENTY-SEVEN: During construction of the project, any and all anticipated or unanticipated conditions encountered which may impact levee integrity or flood control shall be brought to the attention of the Flood Project Inspector immediately and prior to continuation. Any encountered abandoned encroachments shall be completely removed or properly abandoned under the direction

of the Flood Project Integrity and Inspection Branch Inspector.

TWENTY-EIGHT: Cleared trees and brush shall be completely burned or removed from the floodway, and downed trees or brush shall not remain in the floodway during the flood season from November 1 to July 15.

TWENTY-NINE: The pipe shall be placed in the center of an open trench 2 feet wider than the diameter of the pipe.

THIRTY: The pipe shall be placed in an open cut with side slopes of 1 horizontal to 1 vertical or flatter.

THIRTY-ONE: Pipe installed in the levee section and within 10 feet of the levee toes shall be new steel and with minimum wall thickness of 0.375 inches. Steel pipe shall be corrosion-proofed externally with a coating of coal-tar enamel; asphalt-saturated felt wrap; cement mortar; or PVC or polyethylene tape wrapped to a thickness of 30 mils.

THIRTY-TWO: The pipeline shall be tested and confirmed free of leaks by X-ray, pressure tests, or other approved methods during construction or anytime after construction upon request by the Central Valley Flood Protection Board.

THIRTY-THREE: The invert of the pipe and conduit through the levee section shall be above the design flood plane elevation of 13.2 feet, NGVD 29.

THIRTY-FOUR: All pipe joints within the levee section shall be butt welded.

THIRTY-FIVE: The pipe and conduit shall be installed through the levee section at a right angle to the centerline of the levee.

THIRTY-SIX: The abandoned pipes and pump station with all appurtenances shall be removed from the existing site.

THIRTY-SEVEN: The pipe and conduit shall be buried at least 24 inches below the levee crown.

THIRTY-EIGHT: The pipe and conduit shall be buried at least 12 inches below the landward levee slope.

THIRTY-NINE: A positive-closure device that is readily accessible during periods of high water shall be installed on the waterward side of the levee.

FORTY: A suitable siphon breaker and protective housing shall be installed on the apex of the pipe and shall be located off the levee patrol road.

FORTY-ONE: Backfill material for excavations within the levee section and within 10 feet of the levee toes shall be placed in 4- to 6-inch layers, moisture conditioned above optimum moisture content, and compacted to a minimum of 90 percent relative compaction as measured by ASTM Method D1557-91.

FORTY-TWO: Backfill material for excavations within the levee section and within 10 feet of the levee toes shall be impervious material, with twenty (20) percent or more passing the No. 200 sieve, having a plasticity index of eight (8) or more, having a liquid limit of less than fifty (50), and free of stones or lumps that exceed 3 inches in greatest dimension, organic matter, or other unsatisfactory material.

FORTY-THREE: Density tests by a certified materials laboratory will be required to verify compaction of backfill within the levee section and within 10 feet of both levee toes.

FORTY-FOUR: The levee crown patrol road shall be surfaced with a minimum of 4 inches of compacted, Class 2, aggregate base (Caltrans Specification 26-1.02A).

FORTY-FIVE: Aggregate base material shall be compacted to a relative compaction of not less than 95 percent per ASTM Method D1557-91, with a moisture content sufficient to obtain the required compaction.

FORTY-SIX: The project sites shall be restored to at least the condition that existed prior to commencement of work.

FORTY-SEVEN: The permittee shall replant or reseed the levee slopes to restore sod, grass, or other non-woody ground covers if damaged during project work.

FORTY-EIGHT: All debris generated by this project shall be disposed of outside the floodway and off the levee slope.

FORTY-NINE: Debris that may accumulate on the permitted encroachment(s) and related facilities shall be cleared off and disposed of outside the floodway after each period of high water.

FIFTY: In the event that levee or bank erosion injurious to the adopted plan of flood control occurs at or adjacent to the permitted encroachment(s), the permittee shall repair the eroded area and propose measures, to be approved by the Central Valley Flood Protection Board, to prevent further erosion.

FIFTY-ONE: The permittee shall comply with all conditions set forth in the letter from the Department of the Army dated August 16, 2010, which is attached to this permit as Exhibit A and is incorporated by reference.

FIFTY-TWO: The permittee shall comply with the conditions set forth in the letter from the San Joaquin County Flood Control and Water Conservation District dated June 3, 2010, which is attached to this permit as Exhibit B and is incorporated by reference.



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
U.S. Army Engineer District, Sacramento
Corps of Engineers
1325 J Street
Sacramento, California 95814-2922

Flood Protection and Navigation Section (18615)

Mr. Jay Punia, Executive Officer
Central Valley Flood Protection Board
3310 El Camino Avenue, Room 151
Sacramento, California 95821

AUG 16 2010

Dear Mr. Punia:

We have reviewed a permit application by Venetian Bridges Homeowners Association (application number 18615). This project includes replacing an existing 12 inch diameter steel discharge pipe with a new 14 inch diameter steel pipe through the right (north) bank levee of the Calaveras River. This project is located south of Brookside Road and approximately 0.7 miles east of Interstate 5, at 37.9821°N 121.3284°W, in Stockton, California.

The District Engineer has no objection to approval of this application by your Board from a flood control standpoint, subject to the following conditions:

- a. That the invert of the proposed pipe through the levee section shall be above the design profile, which is referenced as 11.4 feet Sea Level Datum 1929 in the Mormon Slough Project, San Joaquin County, California, Channel Improvement and Levee Construction, file number 3-20-142, sheet 142/3, dated November 19, 1965.
- b. That the proposed pipe shall be equipped with a positive closure valve at the waterside edge of the levee crest.
- c. That the applicant shall periodically inspect the positive closure valve to ensure it is functioning properly.
- d. That no excavation shall be made or remain in the project levee and channel during the flood season of November 1 to April 15 unless otherwise approved in writing by your Board.
- e. That the project levee section shall be returned to the existing lines and grade.
- f. That the proposed pipe within the levee section shall be of new steel, at least Number 10 gage, with butt welded joints, and properly soilproofed.

-2-

g. That the proposed pipe in the levee section shall be buried at least 2 feet below the levee crown and on top of the existing levee slopes. If it is necessary to raise the levee crown to provide a minimum of two feet of cover over the top of the proposed pipe, the fill shall be uniformly transitioned on a 1 on 10 slope or flatter on each side of the proposed pipe and feathered into the existing grade.

h. That the existing pipe shall completely removed from the project right-of-way.

i. That in the event trees and brush are cleared, they shall be properly disposed of either by complete burning or complete removal outside the limits of the project right-of-way.

j. That all vegetation removed shall be properly grubbed. All roots greater than ½ inch in diameter shall be completely removed and the levee embankment returned to existing lines and grade.

k. That the backfill over the proposed pipe shall consist of either controlled low-strength material (CLSM) or lean mix concrete. The CLSM or lean mix concrete shall have a 28 day compressive strength of between 15 and 50 psi.

l. That the proposed pipe crossing shall be designed and constructed in accordance with the U.S. Army Corps of Engineers' Engineering Manual (EM) 1110-2-1913, Design Guidance Standard Operating Procedure #3, and California Code of Regulations Title 23 Waters, Division 1 Reclamation Board.

m. That the proposed pipe shall be designed and constructed to prevent 1) flotation, 2) scour or embankment erosion, 3) damage from debris, particularly during flood flows, 4) leakage, 5) seepage along the proposed pipe, 6) corrosion, and 7) damage from vehicular loads.

n. That the pipe shall be clearly marked in the field such that the location can be easily established in a flood event/emergency repair action.

o. That the applicant shall verify the condition of the pipe using video or sonar equipment at least once every five years or annual pressure readings showing no significant loss in pressure and submit the results of the inspection through the Central Valley Flood Protection Board to the Department of Water Resources, Flood Project Integrity and Inspection Branch and this office.

p. That the cut made in the levee section to install the proposed pipe shall have stable side slopes.

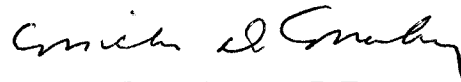
-3-

q. That in the event erosion occurs at the site, the applicant shall repair the eroded areas and place adequate bank protection to prevent future erosion.

A file (SPK-2010-00828) has been opened because a Section 10 and/or Section 404 permit may be required. Please advise the applicant to contact the U.S. Army Corps of Engineers, Sacramento District, Regulatory Division, 1325 J Street, Sacramento, California 95814, telephone (916) 557-5250.

A copy of this letter is being furnished to the acting chief, Flood Project Integrity and Inspection Branch, 3310 El Camino Avenue, Suite LL30, Sacramento, CA 95821.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael D. Mahoney".

Michael D. Mahoney, P.E.
Chief, Construction-Operations Division



SAN JOAQUIN COUNTY

FLOOD CONTROL & WATER CONSERVATION DISTRICT

P. O. BOX 1810

1810 EAST HAZELTON AVENUE
STOCKTON, CALIFORNIA 95201
TELEPHONE (209) 468-3000
FAX NO. (209) 468-2999

THOMAS R. FLINN
DIRECTOR OF PUBLIC WORKS
FLOOD CONTROL ENGINEER

June 3, 2010

Central Valley Flood Protection Board
3310 El Camino Avenue
Sacramento, California 95821

Attention: Floodway Protection Section

SUBJECT: CENTRAL VALLEY FLOOD PROTECTION BOARD PERMIT APPLICATION OF THE
VENETIAN BRIDGES HOMEOWNERS ASSOCIATION, ON THE CALAVERAS RIVER

Gentlemen:

Reference is made to the Central Valley Flood Protection Board Permit Application of Venetian Bridges Homeowners Association to replace an existing 12-inch-diameter steel discharge pipe through the right levee of the Calaveras River. The project is located south of the Brookside Road right-of-way in Stockton (Latitude: 37° 58' 54.37 North, Longitude: 121° 19' 42.38") in San Joaquin County, in Section 32, Township 2 North, Range 6 East, Mount Diablo Base and Meridian, Assessor's Parcel No. 110-090-07.

The San Joaquin County Flood Control and Water Conservation District (District) has reviewed the Central Valley Flood Protection Board Permit Application of the Venetian Bridges Homeowners Association and endorses the project subject to the following conditions:

1. The District shall not be responsible for the maintenance of the facilities specified in this Permit.
2. The District shall not be held liable for damage(s) to the permitted encroachment(s) due to the District's operation, maintenance, flood fight, inspection, or emergency repairs.
3. The Permittee shall be responsible for the modification or possible removal of the facilities, as requested by the District, if required for any future flood control plans at the applicant's sole cost and expense.
4. The Permittee shall be liable for any damage to the Calaveras River that may occur as a result of this project.
5. The project shall be constructed in accordance with the plans dated March 3, 2010 submitted with the application dated May 6, 2010. Any revisions to the project will require the submittal of revised plans to the District for review and approval.
6. No work shall be allowed in the Calaveras River channel between November 1st and April 15th without prior approval of the Central Valley Flood Protection Board and the District.
7. The Permittee shall keep the encroachment(s) properly maintained in accordance with applicable current or future local, State, and Federal standards.
8. Pipes installed through the levee crown shall have a minimum cover of two (2) feet.
9. Access roads shall be kept open for maintenance at all times.
10. Backfill material, within the levee or within fifteen (15) feet of the levee toe, shall be placed in four (4) to six (6) inch layers with approved material and compacted to a minimum of 90 percent relative compaction as per ASTM D-1557. Compaction tests by a certified soils laboratory are required to verify compaction.

Central Valley Flood Protection Board
VENETIAN BRIDGES HOMEOWNERS
ASSOCIATION PERMIT APPLICATION

2

11. All valves or blow-offs or any other appurtenances shall be located, and clearly marked, a minimum of fifteen (15) feet from the landside levee toe of the Calaveras River.
12. Fill material covering the toe of the levee of the Calaveras River shall be keyed into the existing material.
13. Upon completion of the project, the Permittee shall submit a hard copy and an electronic copy in AutoCAD and pdf formats of the as-built drawings to: San Joaquin County Flood Control and Water Conservation District, 1810 East Hazelton Avenue, Stockton, California, 95205; and to the San Joaquin Area Flood Control Agency, 22 East Weber Avenue, Stockton, California 95202.
14. District-approved visible markers shall be installed and maintained by the Permittee to identify the location of the buried pipe.
15. In the event of a leak, the Permittee shall turn off the water pressure within two hours of being notified by the District, the Central valley Flood Protection Board, or the California Department of Water Resources. Repair of the waterline shall commence within 24 hours of a repair request from the District, provided all permits and clearances from appropriate agencies, including the Central Valley Flood Protection Board, are obtained. In the event permanent repairs are not started within 24 hours, the Permittee shall develop and implement an interim plan to prevent damage to, and protect the integrity of, flood control facilities, in coordination with, and to the satisfaction of, the District and the Central Valley Flood Protection Board. Failure to commence repairs within 24 hours of the request, the District will have the repairs made at the expense of the applicant.
16. The applicant shall verify the condition of every pipe through the levee using videotaping or visual inspection methods at least once every five years and submit results of the inspection to the San Joaquin County Flood Control and Water Conservation District; through the Central Valley Flood Protection Board to the Department of Water Resources, Flood Project Integrity and Inspection Branch; and the U.S. Army Corps of Engineers, Sacramento District, Flood Protection and Navigation Section.

If there are any questions regarding these comments, please contact me at (209) 953-7617.

Sincerely,



MARK W. CONNELLY
Engineering Services Manager

MWC:JC:to
FM-10E068-T1

CALAVERAS RIVER PUMP DISCHARGE PIPE REPLACEMENT

GENERAL NOTES

- 1.0 **GENERAL**
- 1.1 **DEFINITIONS**
- A. ENGINEER: LAURENCE TEST, RCE
- B. OWNER: VENETIAN BRIDGES HOME OWNERS ASSOCIATION
- C. OWNER'S REPRESENTATIVE: JOHN LETT
- D. STATE INSPECTOR: DAVID PESAVENTO, CALIFORNIA DEPARTMENT OF WATER RESOURCES
- E. COUNTY INSPECTOR: MR. BUTCH WADDLE, SAN JOAQUIN COUNTY FLOOD CONTROL DISTRICT
- 1.2 **GOVERNING AUTHORITY SCOPE OF WORK**
- A. THIS WORK CONSISTS OF THE FURNISHING OF ALL LABOR, TOOLS, MATERIALS, EQUIPMENT, TESTS, PERMITS, ETC., NECESSARY FOR THE INSTALLATION OF IMPROVEMENTS AS SHOWN ON DRAWINGS. AND DESCRIBED HEREIN
- B. ALL LOCAL, MUNICIPAL AND STATE LAWS, RULES AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS WORK ARE HEREBY INCORPORATED INTO AND MADE A PART OF THESE SPECIFICATIONS AND THEIR PROVISIONS SHALL BE CARRIED OUT BY THE CONTRACTOR.
- 2.0 **CONTROL OF WORK**
- 2.1 **STANDARDS**
- A. ALL CONSTRUCTION SHALL CONFORM WITH THE STANDARDS SET FORTH IN ARTICLE B OF THE CALIFORNIA CODE OF REGULATIONS, TITLE 23
- 2.2 **PERMITS**
- A. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS REQUIRED BY GOVERNING AUTHORITIES FOR THE COMPLETION OF THE WORK. THE FEES, CHARGES, OR OTHER COSTS FOR SAID PERMITS SHALL BE INCLUDED IN THE CONTRACTOR'S BID PRICE FOR THE WORK.
- B. TRENCHES OR EXCAVATIONS 5 FEET OR MORE IN DEPTH INTO WHICH A PERSON IS REQUIRED TO DESCEND REQUIRE A SEPARATE PERMIT FROM THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY.
- 2.3 **ACCESS TO THE SITE**
- A. VEHICULAR AND EQUIPMENT ACCESS TO THE WORK SITE SHALL BE MADE THROUGH EXISTING ACCESS POINTS TO THE PATROL ROAD ONLY.
- B. CONTACT SAN JOAQUIN COUNTY FLOOD CONTROL DISTRICT FOR ACCESS AT THESE POINTS.
- 2.4 **CONSTRUCTION CONTROLS**
- A. THE OWNER WILL PROVIDE ONE SET OF CONSTRUCTION CONTROLS FOR THE WORK
- B. THE DATUM FOR HORIZONTAL COORDINATES IS A LOCAL COORDINATE SYSTEM ESTABLISHED FOR THE SITE.
- C. THE DATUM FOR VERTICAL ELEVATIONS IS USGS AND IS SHOWN ON THE DRAWINGS.
- D. THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL CONSTRUCTION CONTROLS UNTIL COMPLETION OF THE WORK.
- 2.5 **COORDINATION AND VERIFICATION**
- A. THE CONTRACTOR SHALL COORDINATE DEMOLITION OF EXISTING FACILITIES WITH THE INSTALLATION OF NEW WORK INDICATED ON OTHER DRAWINGS
- B. THE CONTRACTOR SHALL VERIFY ALL SIZES OF PREPARATORY WORK FOR EQUIPMENT OF OTHERS AND SHALL COORDINATE THE WORK ON THIS CONTRACT WITH ALL WORK FURNISHED BY OTHERS.
- C. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, AND ALL EXISTING CONDITIONS AT THE SITE BEFORE COMMENCING WORK AND REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO THE START OF WORK.
- D. THE CONTRACTOR SHALL VERIFY THE DEPTH AND EXACT LOCATION OF ALL POINTS OF CONNECTION TO EXISTING SERVICES, PIPES TO BE PLUGGED, OR CAPPED, POINTS OF INTERFERENCE, ETC. BY EXCAVATION PRIOR TO COMMENCING WORK
- 2.6 **INSPECTION & TESTING**
- A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING ALL INSPECTIONS AND ANY MATERIAL TESTING REQUIRED BY THE GOVERNING AUTHORITY.
- 2.7 **GEOTECHNICAL SERVICES**
- A. ALL GRADING AND COMPACTION OPERATIONS SHALL BE MONITORED BY THE OWNER'S SOILS ENGINEER AND HIS RECOMMENDATIONS SHALL BE MADE DIRECTLY TO THE OWNER'S REPRESENTATIVE FOR APPROVAL.
- 2.8 **COMPACTION TESTING**
- A. THE OWNER WILL PROCURE AND PAY FOR ALL TESTING.
- B. REPORTS OF COMPACTION TESTING WILL BE MADE AVAILABLE TO THE CONTRACTOR, INSPECTOR, OWNER AND ENGINEER.
- C. ANY SECTION FAILING TO MEET OR EXCEED THE REQUIREMENTS OF THE SPECIFICATIONS SHALL BE RECOMPACTED AND RETESTED
- D. COMPACTION TESTS SHALL BE PERFORMED ACCORDING TO THE FOLLOWING SCHEDULE:
- | FACILITY | INTERVAL | TEST DEPTHS |
|----------------------------|----------|-----------------|
| TRENCHES LESS THAN 6" DEEP | 25' O.C. | 1 EA. @ 6"-12" |
| | | 1 EA. @ 20"-30" |
- 2.9 **QUALITY CONTROL TESTING**
- A. THE COMPLETED PIPELINE SHALL BE SUBJECT TO A ONE HOUR HYDRAULIC PRESSURE TEST, IN ACCORDANCE WITH AWWA STANDARDS.

- 2.10 **RECORD DRAWINGS**
- A. THE CONTRACTOR SHALL MAINTAIN A NEATLY MARKED SET OF FULL-SIZED RECORD DRAWINGS SHOWING THE FINAL LOCATION AND LAYOUT OF ALL IMPROVEMENTS INSTALLED.
- B. THE RECORD DRAWINGS SHALL REFLECT ALL CHANGES IN THE WORK THAT DEVIATE FROM THE INFORMATION SHOWN ON THE DRAWINGS. WHERE NECESSARY TO DEPICT CHANGED CONDITIONS, THE CONTRACTOR SHALL PREPARE SUPPLEMENTAL DRAWINGS.
- 2.11 **WORK PLAN**
- A. THE CONTRACTOR SHALL PREPARE AND SUBMIT FOR THE ENGINEERS APPROVAL, A WORK PLAN FOR HIS APPROACH TO COMPLETING THE WORK. THE WORK PLAN SHALL INCLUDE A SCHEDULE OF EVENTS, ESTIMATED TIMELINE, AND A TRAFFIC CONTROL PLAN.
- 3.0 **LEGAL RELATIONS & RESPONSIBILITY TO THE PUBLIC**
- 3.1 **RESPONSIBILITIES OF CONTRACTOR**
- A. CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE DESIGN PROFESSIONAL.
- 3.2 **TRAFFIC CONTROL**
- A. THE LEVEE PATROL ROAD MAY BE CLOSEOFF DURING CONSTRUCTION.
- B. THE CONTRACTOR SHALL PROVIDE BARRICADES ON THE PATH EASTERLY AND WESTERLY OF THE PROJECT AREA. THE WEST END IS TO BE AT THE DOWN RAMP JUST EAST OF INTERSTATE 5 AND AT THE EAST END IS TO BE JUST WEST OF THE MC GAW ROAD DOWN RAMP, NEAR STAGG HIGH SCHOOL
- C. BARRICADES SHALL EXTEND ACROSS THE ENTIRE PATHWAY SO AS NOT TO ALLOW ACCESS OF ANY TYPE.
- D. APPROPRIATE SIGNAGE SHALL BE INSTALLED INDICATING THAT PATH IS CLOSED TO TRAFFIC AND TRAFFIC IS DETOURED TO BROOKSIDE ROAD.
- E. AT NO TIME SHALL THE EXCAVATION BE LEFT OPEN OR UNATTENDED. ALL SECTIONS OF WORK SHALL BE COMPLETED OR PLATED OVER AT THE END OF EACH DAY'S WORK.
- F. NO WORK SHALL BE PERFORMED FROM WITHIN THE BROOKSIDE ROAD RIGHT OF WAY.
- G. AT ANY TIME WHEN WORK IS BEING PERFORMED WITHIN TEN (10) FEET OF THE BROOKSIDE ROAD RIGHT OF WAY, APPROPRIATE BARRICADES, WARNING DEVICES, AND FLAGGERS SHALL BE USED TO WARN AND CONTROL TRAFFIC.
- 4.0 **PROSECUTION AND PROGRESS**
- 4.1 **PBE CONSTRUCTION CONFERENCE**
- A. AT LEAST 72 HOURS PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL CONTACT THE OWNER'S REPRESENTATIVE, THE ENGINEER, AND THE STATE INSPECTOR TO ARRANGE A PRE-CONSTRUCTION CONFERENCE. CONSTRUCTION SHALL NOT COMMENCE UNTIL THE CONFERENCE IS COMPLETED.
- 4.2 **PROSECUTION OF WORK**
- A. THE CONTRACTOR SHALL COMMENCE WORK WITHIN 48 HOURS OF THE PRE CONSTRUCTION CONFERENCE AND DILIGENTLY PROSECUTE THE WORK TO COMPLETION.

- 5.0 **GENERAL CONSTRUCTION NOTES**
- 5.1 **EXISTING UTILITIES**
- A. EXISTING UTILITIES ARE SHOWN AS THEY ARE BELIEVED TO EXIST. THE OWNER AND THE DESIGN PROFESSIONAL DO NOT ACCEPT RESPONSIBILITY FOR THEIR ACCURACY.
- B. THE CONTRACTOR'S ATTENTION IS CALLED TO: SECTION 1540 (A) (1) OF THE CONSTRUCTION SAFETY ORDERS (TITLE 8 CALIFORNIA ADMINISTRATION CODE SECTION 1540), ISSUED BY THE OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD PURSUANT TO THE CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH ACT OF 1973, AS AMENDED, WHICH STATES:
- "PRIOR TO OPENING AN EXCAVATION, EFFORT SHALL BE MADE TO DETERMINE WHETHER UNDERGROUND INSTALLATION I.E., SEWER, WATER, FUEL, ELECTRIC LINES, ETC., WILL BE ENCOUNTERED AND, IF SO, WHERE SUCH UNDERGROUND INSTALLATIONS ARE LOCATED. WHEN THE EXCAVATION APPROACHES THE APPROXIMATE LOCATION OF SUCH AN INSTALLATION, THE EXACT LOCATION SHALL BE DETERMINED BY CAREFUL PROBING OR HAND DIGGING AND WHEN IT IS UNCOVERED, ADEQUATE PROTECTION SHALL BE PROVIDED FOR THE EXISTING INSTALLATION. ALL KNOWN OWNERS OF UNDERGROUND FACILITIES IN THE AREA CONCERNED SHALL BE ADVISED OF PROPOSED WORK AT LEAST 48 HOURS PRIOR TO THE START OF ACTUAL EXCAVATION."
- C. PRIOR TO COMMENCING ANY WORK, THE CONTRACTOR SHALL HAVE EACH UTILITY COMPANY ACCURATELY LOCATE IN THE FIELD THEIR MAINS AND SERVICE LINES. THE CONTRACTOR SHALL NOTIFY MEMBERS OF THE UNDERGROUND SERVICE ALERT (U.S.A.) 48 HOURS IN ADVANCE OF PERFORMING EXCAVATION WORK BY CALLING THE TOLL-FREE NUMBER (800-227-2600).
- D. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING FROM DAMAGE ALL EXISTING IMPROVEMENTS THAT ARE TO REMAIN. SUCH IMPROVEMENTS THAT ARE DAMAGED BY THE CONTRACTOR SHALL BE REPLACED AT HIS EXPENSE.
- E. IT SHALL BE CONTRACTOR'S SOLE RESPONSIBILITY TO PROTECT ALL EXISTING UTILITIES SO THAT NO DAMAGE RESULTS TO THEM DURING THE PERFORMANCE OF HIS CONTRACT. THE CONTRACTOR SHALL BE REQUIRED TO COOPERATE WITH OTHER CONTRACTORS AND UTILITY COMPANIES INSTALLING NEW STRUCTURES, UTILITIES AND SERVICES TO THE DEVELOPMENT.
- F. PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL EXPOSE EXISTING WATER, STORM DRAINS AND SANITARY SEWERS WHERE CONNECTIONS ARE TO BE MADE AND SHALL VERIFY THEIR ACTUAL LOCATION AND FLOW LINE ELEVATIONS.
- 5.2 **EXCAVATIONS**
- A. EXCAVATION OF 5 FEET OR MORE IN DEPTH WILL REQUIRE AN EXCAVATION PERMIT FROM THE STATE OF CALIFORNIA DEPARTMENT OF INDUSTRIAL SAFETY
- 5.3 **STORM WATER POLLUTION PREVENTION**
- A. THE CONTRACTOR SHALL COMPLY WITH THE PROVISIONS OF THE CALIFORNIA GENERAL CONSTRUCTION ACTIVITY STORM WATER PERMIT AND STATE WATER RESOURCES CONTROL BOARD ORDER NO. 99-08-DWQ. COMPLIANCE IS MANDATORY PER THE CITY OF STOCKTON'S GRADING AND EROSION CONTROL ORDINANCE, CHAPTER 13, PART V, SECTIONS 13-500 THROUGH 13-513 OF THE STOCKTON MUNICIPAL CODE.
- B. UTILIZE SEDIMENTATION OR FILTERING CONTROL MEASURE TO REMOVE SEDIMENT FROM DEWATERING WATERS PRIOR TO DISCHARGE. IN ORDER TO COMPLY WITH STATE WATER RESOURCES CONTROL BOARD ORDER NUMBER92-08-DWQ,

- 5.4 **PREPARATION**
- A. PRIOR TO UNDERGROUND CONSTRUCTION. THE CONTRACTOR SHALL EXPOSE THE EXISTING PIPELINE AT POINTS OF CONNECTION FOR PURPOSES OF VERIFYING EXACT ELEVATIONS AND LOCATIONS.
- B. THE ENGINEER SHALL DETERMINE IF ADJUSTMENTS IN GRADE OR SLOPE OF NEW IMPROVEMENTS ARE REQUIRED.
- 5.5 **DEMOLITION**
- A. CONTRACTOR SHALL DEMOLISH, EXCAVATE, REMOVE AND DISPOSE OF EXISTING STEEL PIPE AND STEEL CONDUCTOR CASING AND DELETERIOUS MATERIAL AS INDICATED ON THE DRAWINGS OR AS REQUIRED TO CONSTRUCT THE CONTRACT WORK.
- B. THE CONTRACTOR SHALL REMOVE FROM THE SITE, RECYCLE, SALVAGE OR DISPOSE OF ALL MATERIALS GENERATED DURING DEMOLITION OPERATIONS.
- 5.6 **SITE PREPARATION, GRADING AND EARTHWORK**
- A. ALL TOPSOIL, VEGETATION, ORGANICS, AND DEBRIS SHALL BE REMOVED FROM THE AREA OF WORK. STRIPPED SOIL SHALL NOT BE USED IN TRENCH BACKFILL.
- B. STOCKPILES OF EXISTING DELETERIOUS MATERIAL SHALL BE DISPOSED OF UNDER THE DIRECTION AND SUPERVISION OF THE ENGINEER.
- 5.7 **CONSTRUCTION**
- A. THE EXISTING ASPHALT PATROL ROAD SHALL BE SAW CUT AS INDICATED ON THE PLAN AND REMOVED PRIOR TO EXCAVATION.
- B. AFTER REMOVING THE EXISTING PIPE, THE BOTTOM OF THE EXCAVATION, AT THE CROWN OF THE LEVEE SHALL BE OVER EXCAVATED BY 12" AND BACKFILLED TO THE DESIGN ELEVATION AND GRADE, AS INDICATED ON THE PLAN.
- C. COMPACTION OF THE PIPE BEDDING SHALL BE AS SPECIFIED UNDER TRENCH BACKFILL.
- D. THE BOTTOM OF REPLACEMENT PIPE SHALL BE INSTALLED ABOVE FLOOD PLANE ELEVATION WHERE IT PASSES THROUGH THE CROWN OF THE LEVEE
- E. THE FINAL LENGTH OF PIPE REPLACEMENT WILL BE DETERMINED BY THE ENGINEER AT TIME OF CONSTRUCTION
- F. TRENCHING FOR NEW PIPING SHALL BE TWO (2) FEET MIN. WIDER THAN THE PIPE.
- G. SIDE SLOPES OF EXCAVATIONS SHALL NOT EXCEED 1:1
- H. MINIMUM COVER FOR HORIZONTAL PIPING THROUGH THE CROWN OF THE LEVEE SHALL BE TWO (2) FEET. MINIMUM COVER OVER PIPE IN LEVEE SIDE SLOPES SHALL BE ONE (1) FOOT
- I. INSTALL THE NEW PIPE ON THE PREPARED BEDDING.
- K. PROVIDE TEMPORARY PLUGS AT BOTH ENDS OF NEW SECTION AND FITTINGS FOR AIR VALVE FOR TESTING PURPOSES.
- L. THE NEW PIPE SHALL BE PRESSURE TESTED AT 150 PSI FOR 1 HOUR
- M. REPAIR LEAKS IF ANY AND RE-TEST UNTIL THE PIPE PASSES.
- N. APPLY EPOXY COATING TO FIELD WELDS, ETC. PER SECTION 1.3 OF THE MATERIALS SPECIFICATIONS.
- O. MAKE FINAL CONNECTIONS TO THE EXISTING PUMP AND PIPE
- P. THE OWNER WILL COORDINATE THE REMOVAL OF THE EXISTING SMALL DRAINAGE PUMP FROM THE PUMP PLATFORM AND RECONNECTING OF THE ELECTRICAL TO THE MAIN PUMP
- Q. THAT CONTRACTOR SHALL BE ON SITE DURING OPERATION OF THE MAIN PUMP FOR THE FIRST TIME.
- 5.8 **TRENCH BACKFILL**
- A. BACKFILL MATERIAL FOR EXCAVATIONS WITHIN LEVEE SECTION AND WITHIN 10 FEET OF THE LEVEE TOES SHALL BE IMPERVIOUS MATERIAL, 20 PERCENT OR MORE, PASSING THE NO. 200 SIEVE, A PLASTICITY INDEX OF 8 OR MORE, AND A LIQUID LIMIT OF LESS THAN 50, AND FREE OF LUMPS OR STONES EXCEEDING 3 INCHES IN GREATEST DIMENSION, VEGETATIVE MATTER, OR OTHER UNSATISFACTORY MATERIAL.
- B. BACKFILL MATERIAL FOR EXCAVATIONS WITHIN LEVEE SECTION AND WITHIN 10 FEET OF THE LEVEE TOES SHALL BE PLACED IN 4 TO 6 INCH LAYERS, MOISTURE-CONDITIONED ABOVE OPTIMUM MOISTURE CONTENT, AND COMPACTED TO A MINIMUM OF 90 PERCENT RELATIVE COMPACTION AS MEASURED BY ASTM METHOD D1557-91.
- C. FINISH GRADE AREA TO A UNIFORM GRADE AND SLOPE
- 5.9 **FINISHED GRADING**
- A. ANY EXCESS MATERIAL GENERATED DURING CONSTRUCTION INSIDE THE LEVEE SHALL BE REMOVED.
- B. THE ENTIRE AREA OF WORK SHALL BE GRADED TO A SMOOTH, UNIFORM GRADE AND LEFT IN A NEAT CONDITION.
- 5.10 **PAVEMENT REPLACEMENT**
- A. PAVEMENT SHALL BE REPLACED WITH PAVEMENT MATERIALS EQUAL TO OR BETTER THAN THE MATERIALS USED IN THE ORIGINAL PAVING. THE FINISHED PAVEMENT SHALL BE SUBJECT TO THE APPROVAL OF THE CITY ENGINEER IF LOCATED WITHIN CITY RIGHT-OF-WAY.
- B. PAVEMENT STRIPING SHALL BE REPLACED TO MATCH EXISTING.
- 5.11 **CLEAN UP**
- A. THROUGHOUT ALL PHASES OF CONSTRUCTION, INCLUDING SUSPENSION OF WORK, AND UNTIL FINAL ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL KEEP THE PREMISES OCCUPIED BY HIM IN A CLEAN AND ORDERLY CONDITION, DISPOSING OF REFUSE IN A MANNER SATISFACTORY TO THE ENGINEER

- 1.0 **MATERIALS SPECIFICATIONS**
- 1.1 **STEEL PIPE**
- A. THE PIPE FABRICATOR SHALL PREPARE SHOP DRAWINGS OF THE PIPE AND FITTINGS FOR THE ENGINEERS APPROVAL PRIOR TO FABRICATION
- B. WELDED STEEL PIPE SHALL CONFORM TO THE SPECIFICATIONS OF AWWA DESIGNATION: C 200; ASTM DESIGNATION: A 53, GRADE B; API SPECIFICATION 5L, GRADE B; OR API SPECIFICATION 5LX, GRADE X42.
1. ALL STEEL USED FOR THE MANUFACTURE OF THE PIPE SHALL BE MADE BY EITHER THE OPEN-HEARTH OR ELECTRIC-FURNACE PROCESS.
2. STEEL PIPE SHALL BE ELECTRICALLY RESISTANCE WELDED, STRAIGHT SEAM, WITH 0.375" MINIMUM WALL THICKNESS, 54.5 LB.LF, AND AN OUTSIDE DIAMETER OF 14".
3. AFTER THE PIPE HAS BEEN FABRICATED AND WELDED INTO LENGTHS, IT SHALL BE THOROUGHLY CLEANED OF DIRT, OIL, GREASE, LOOSE SCALE, AND OTHER FOREIGN MATERIAL INSIDE AND OUT AND PREPARED FOR LINING AND COATING.
- 1.2 **STEEL FITTINGS**
- A. STEEL FITTINGS ARE DEFINED AS A SPECIAL PIECE OF PIPE OTHER THAN A NORMAL STRAIGHT SECTION. ELBOWS, CROSSES, TEES, COLLARS, AND REDUCERS ARE FITTINGS.
- B. FITTINGS SHALL BE BUTT-WELDED CONFORMING TO AWWA 208.
- C. WELDS SHALL BE PREPARED PER EPOXY COATING MANUFACTURER'S DIRECTIONS
- D. HAND HOLES FOR APPLICATION OF EPOXY COATING TO INSIDE OF PIPE AT WELDS SHALL BE PROVIDED AS NESSARY AND SHALL BE SHOWN ON SHOP DRAWINGS..

- 1.3 **PIPE LINING & COATING**
- A. APPLY EPOXY LINING AND COATING OF PIPE AND FITTINGS PER AWWA C-210. SURFACE PREPARATION OF PIPE AND FITTINGS SHALL BE IN ACCORDANCE WITH SSPC-SP10 AND MANUFACTURER'S DIRECTIONS.
- B. EPOXY MATERIALS SHALL BE 2-PART, 100% SOLIDS, "CARBOLINE 4500" OR EQUAL. APPLY EPOXY USING ELECTROSTATIC SPRAY PROCESS IN 3 COATS TO ACHIEVE A FINAL MINIMUM FILM THICKNESS OF 25 MILLS.
- C. SHOP TEST TEST LINING AND COATING WITH A LOW-VOLTAGE WET SPONGE HOLIDAY DETECTOR IN ACCORDANCE WITH AWWA C213 . CHECK FOR COATING DEFECTS ON THE WELD SEAM CENTERLINES. REAPPLY COATING TO REPAIR HOLIDAYS, PIN HOLES, AND DEFECTS PER MANUFACTURER'S DIRECTIONS.
- D. COATING OF FIELD WELDS AND TOUCHUP SHALL BE PER MANUFACTURER'S DIRECTIONS.
- 1.4 **PIPE COUPLING**
- A. PIPE COUPLING SLEEVES AND ENDS SHALL BE DUCTILE IRON CONFORMING TO ASTM A56T GRADE 65-45-12. RUBBER RINGS AND GASKETS SHALL BE NATURAL OR SYNTHETIC RUBBER OR NEOPRENE CONFORMING TO ASTM D-2000. BOLTS SHALL BE HIGH STRENGTH STAINLESS STEEL CONFORMING TO AWWA C111. THE ENTIRE COUPLING SHALL BE COATED WITH A MINIMUM OF 12 MILLS OF FUSION BONDED EPOXY, DRESSER, ROMAC OR EQUAL
- 1.5 **AIR VALVE**
- A. AIR VENT SHALL RELEASE ENTRAPPED AIR AND PROVIDE VACUUM RELIEF FOR PUMP DISCHARGE PIPELINES. AIR VENT SHALL BE 3" SIZE, MOD 3000 AS MANUFACTURED BY FRESNO VALVES & CASTINGS, INC.
- 1.6 **PIPELINE MARKERS**
- A. PIPELINE MARKERS SHALL BE FIBERGLASS UNDERGROUND UTILITY MARKER POST THAT SHALL BE RIGID ENOUGH TO BE INSTALLED EASILY IN MOST SOIL CONDITIONS AND HAS THE DURABILITY TO WITHSTAND REPEATED IMPACTS. POST SHALL HAVE 3-RAIL DESIGN THAT ALLOWS THE POST TO BEND OVER WHEN HIT, THEN SNAP BACK TO ITS ORIGINAL UPRIGHT POSITION.
- B. PIPELINE MARKER POST SHALL BE SATURATED WITH BRIGHT GREEN PIGMENT AND UV STABILIZERS. MARKER POST SHALL BE GUARANTEED NOT TO FADE OR FIBERBLOOM FOR AT LEAST TEN YEARS. FOUR (4) ARE REQUIRED.
- 1.7 **LOCATOR WIRE**
- A. LOCATOR WIRE SHALL BE #12 UF CONFORMING TO NEMA STANDARDS AND NEC ARTICLE 339 FOR DIRECT BURIAL. SPLICING OF WIRE SHALL BE MADE WITH A WATER PROOF EPOXY SPLICE KIT.

OWNER'S REPRESENTATIVE
JOHN LETT, DIRECTOR
VENETIAN BRIDGES
HOMEOWNERS ASSOCIATION
5345 N. EL DORADO STREET, #8
STOCKTON, CA. 95207
(510) 853-1729

ENGINEER
LAURENCE TEST, RCE
PO BOX 4561 STOCKTON, CA
95204
(209) 948-2081
(209) 481-8173

REGULATORY AGENCIES:

DEPARTMENT OF WATER RESOURCES
MR. DAVID PESAVENTO, P.E., ENGINEER
DIVISION OF FLOOD MANAGEMENT
FLOOD PROJECT INSPECTION SECTION
3310 EI CAMINO AVENUE, LL30
SACRAMENTO, CALIFORNIA 95821
(916) 870-9482

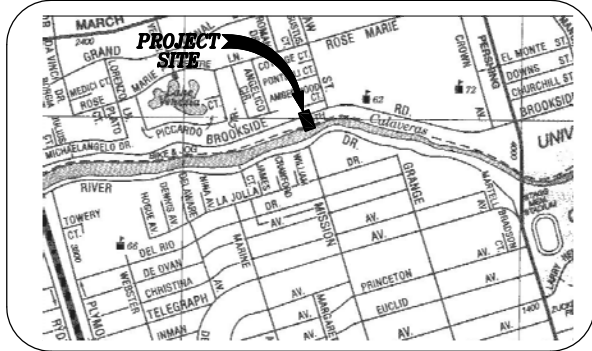
SAN JOAQUIN FLOOD CONTROL DISTRICT
MR. BUTCH WADDLE
PO BOX 1810
STOCKTON, CA 95201
(209) 468-9698

PROJECT CONTACTS

- 1 LOCATION: LEVEE MILE 22.98, RIGHT BANK, UNIT 15, SAN JOAQUIN COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT.
- 2 TBM TEMPORARY BENCH MARK: NAIL AN SHINER IN THE CENTER OF THE PATROL ROAD, 20 FEET EAST OF THE PROJECT SITE. ELEVATION 21.24 (NAVD 88) BASED ON TOPOGRAPHIC SURVEY DATUM OF C.O.S. MON. "8S-16", EL=8.38 (NAVD 88)
- 3 FLOOD ELEVATION: 15.5'(NAVD 88) PER "S.J.C.F.C.A. LOWER CALAVERAS RIVER PROVISIONIALLY ACCREDITED (PAL) LEVEE SURVEYS", SHEET 9, DATED APRIL, 2009, KSN DRAWING 2091-0080-9.

GENERAL NOTES

SCALE: NONE



VICINITY MAP

SCALE: NONE

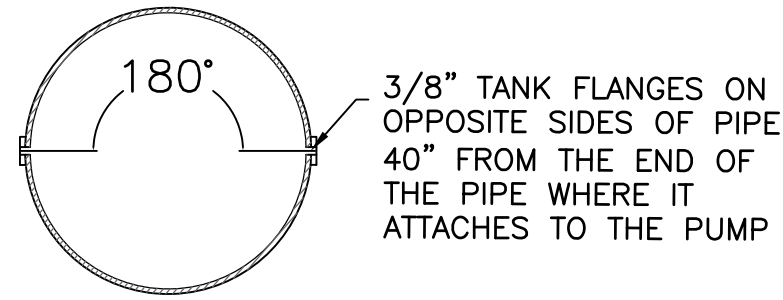
| | |
|---------|--------|
| JOB NO. | 10-02 |
| DATE | 6/8/10 |
| DESIGN | LLT |
| DRAWN | LLT |
| CHECKED | LLT |
| SHEET | |



CA: 800-227-2600

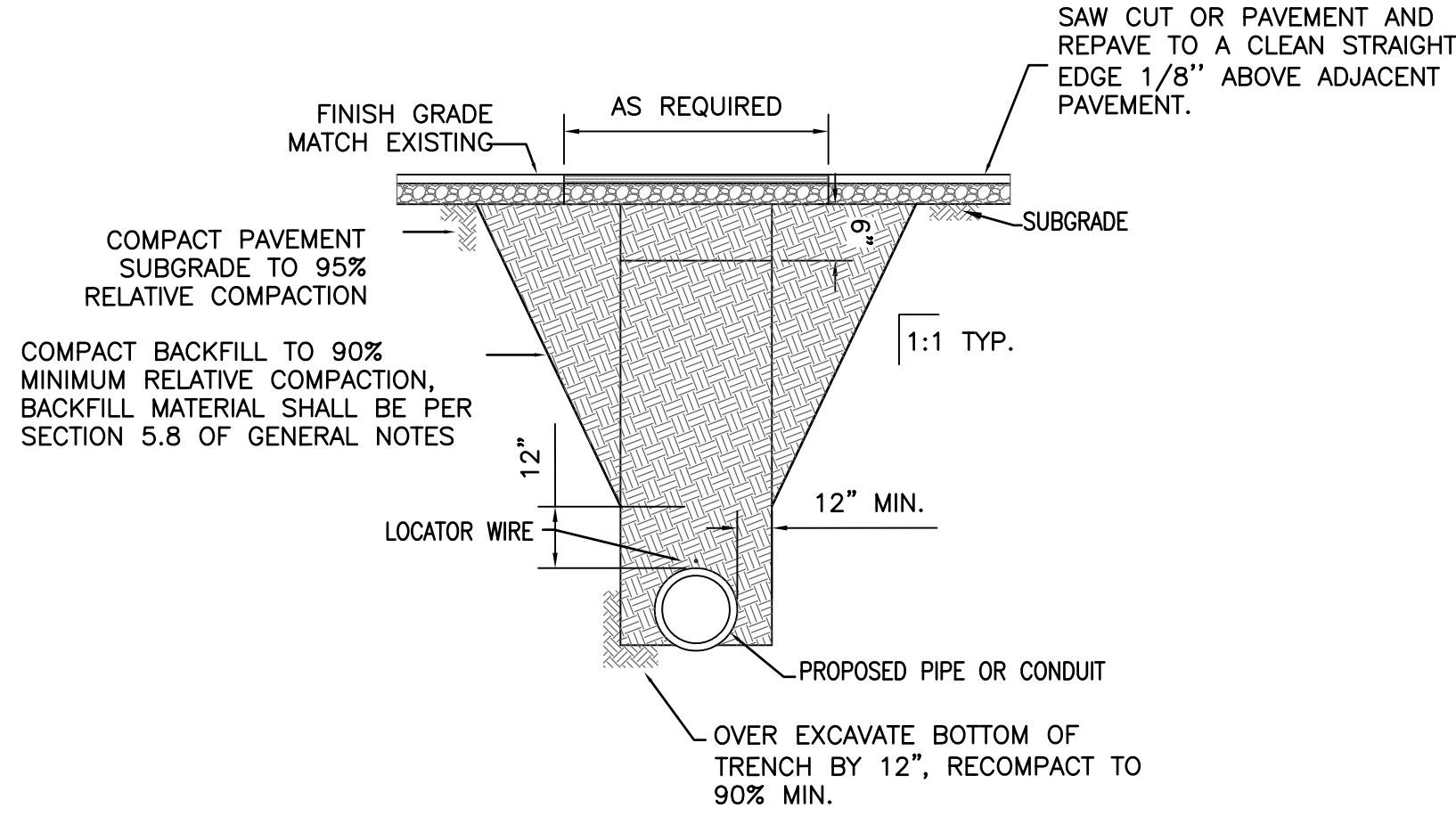
NV: 800-227-2600





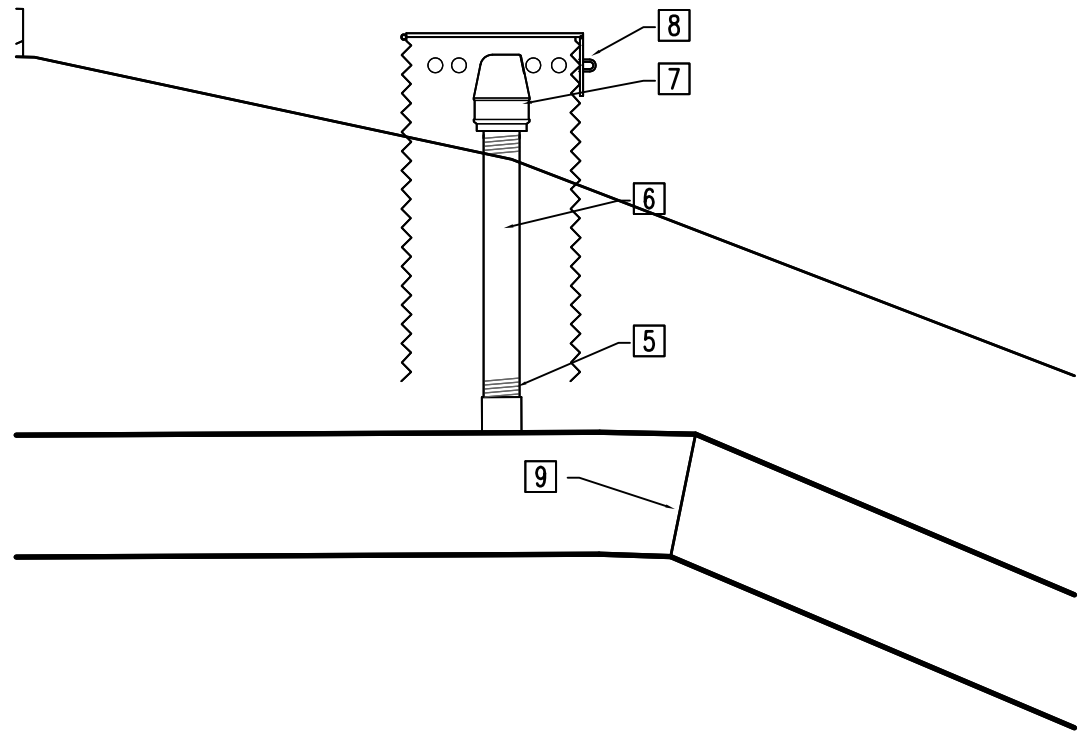
6 TEST FITTINGS

SCALE: NONE



5 TRENCH BACKFILL

SCALE: 1"=20'



7 AIR/VACUUM VALVE DETAIL

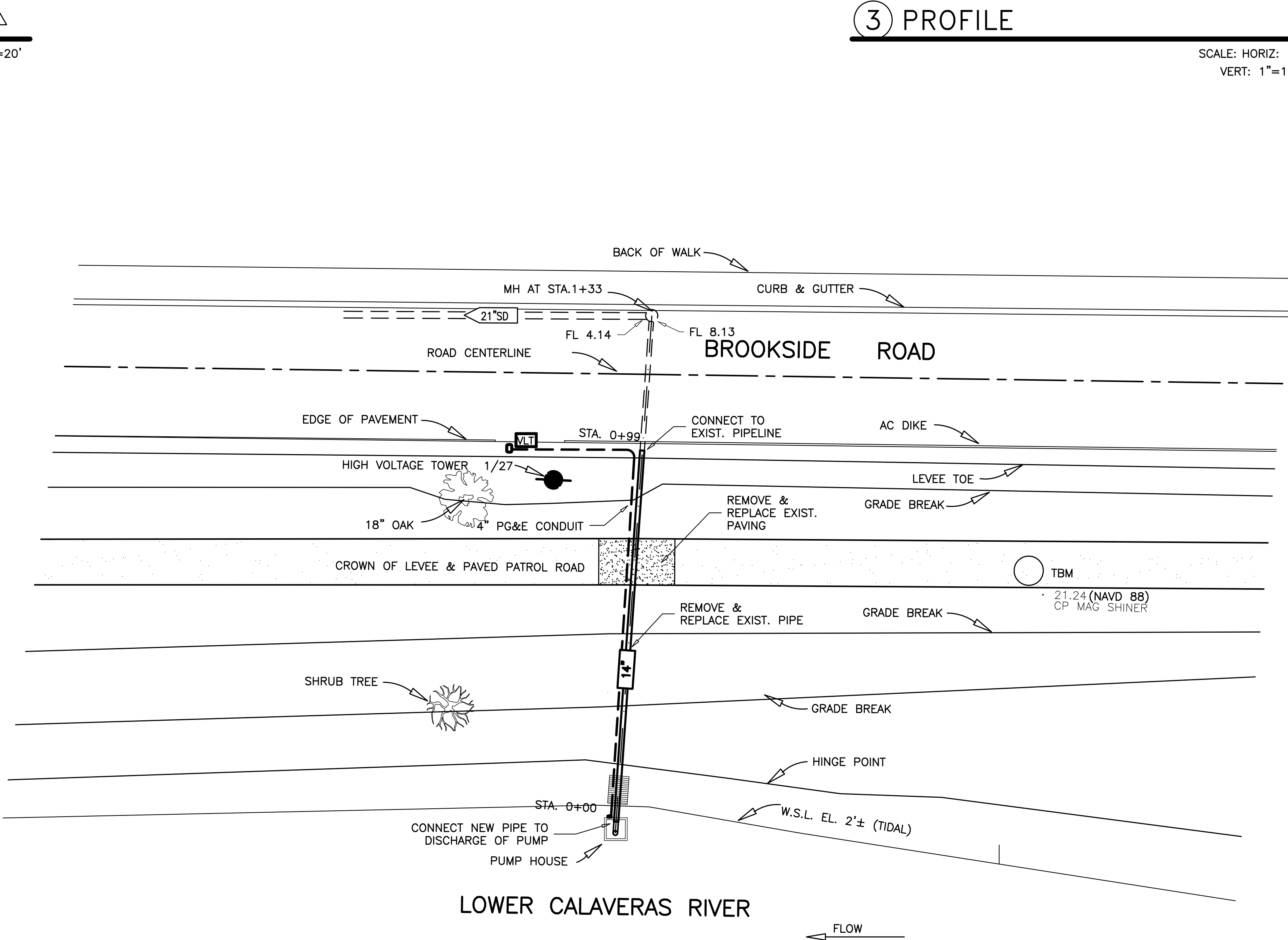
SCALE: NONE

- 1 PIPE COUPLING, SIZED AS REQUIRED FOR PIPES
- 2 TANK COUPLINGS FOR HYDRAULIC TEST EQUIPMENT, 5 FEET MIN FROM PUMP, SEE DETAIL 6
- 3 14" STEEL PIPE, LENGTHS AS REQ'D.
- 4 14" FABRICATED STEEL 11-1/4" ELL AS REQ'D BUTT WELDED JOINTS
- 5 3" HALF COUPLING OR TANK FLANGE WELDED ON 14" PIPE FOR RISER
- 6 3" SCH. 80 PVC RISER
- 7 3" AIR/VACUUM VENT
- 8 18" DIAM. CORRUGATED STEEL PIPE ENCLOSURE FOR AIR/VAC VALVE, WITH HINGED LID AND PADLOCK HASP. DRILL 8 1/2" DIAM. HOLES AROUND CIRCUMFERENCE OF PIPE, 3" FROM TOP
- 9 14" FABRICATED STEEL 22-1/2" ELL AS REQ'D WITH BUTT WELDED JOINTS
- 10 BUTT WELD TO EXISTING PIPE
- 11 INSTALL LOCATOR WIRE IN TRENCH ABOVE PIPE, PER DETAIL. LEAVE A 48" LOOP IN A VALVE BOX AT EACH END OF THE PIPELINE
- 12 REPLACE ASPHALT PEDESTRIAN PATH
- 13 IN-LINE VALVE: FRESNO 40YW, 14" WITH STEEL STUBS, EPOXY COATED INSIDE & OUT, OPERATING NUT WITH CHRISTY G-5 VALVE BOX AND 6" PVC RISER OVER OPERATING NUT. THE CONTRACTOR SHALL PROVIDE THE OWNER WITH A 4' LONG VALVE KEY

NOTE: SEE SHEET C-1 FOR MATERIALS SPECIFICATIONS

8 CONSTRUCTION NOTES

SCALE: NONE



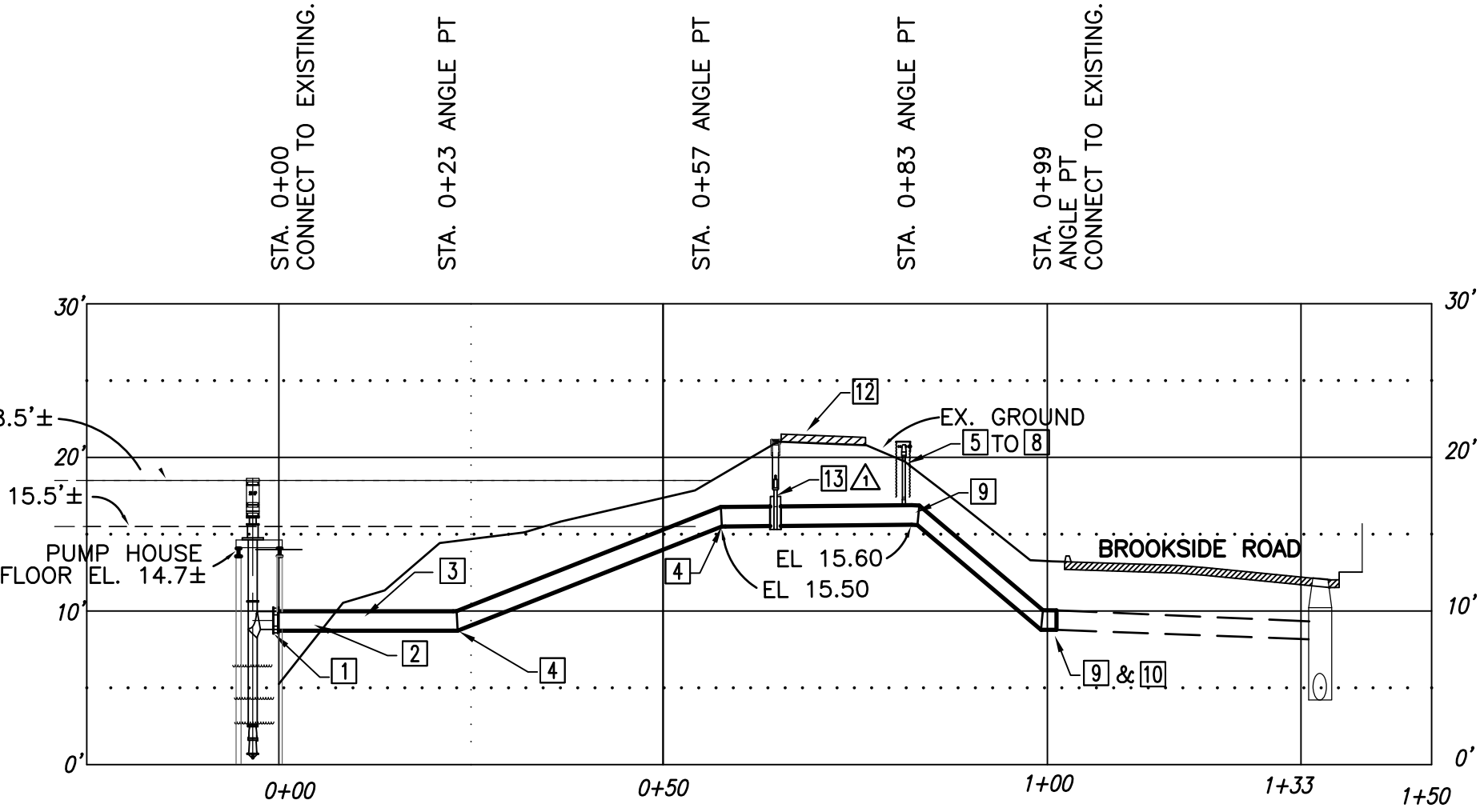
2 PLAN

SCALE: 1"=20'

- | | | | |
|-------------------------------------|--------------------------------------|-----|----------------------|
| AC | ASPHALTIC CONCRETE | (P) | PROPOSED |
| (E) | EXISTING | STA | STATION |
| EL | ELEVATION | TBM | TEMPORARY BENCH MARK |
| FL | FLOW LINE | WS | WATER SURFACE |
| MH | MAN HOLE | | |
| <input checked="" type="checkbox"/> | SPECIAL NOTE, SEE CONSTRUCTION NOTES | | |

1 LEGEND

SCALE: NONE



3 PROFILE

SCALE: HORIZ: 1"=20'
VERT: 1"=10'

LAURENCE TEST & ASSOCIATES
CIVIL ENGINEERING
LANDSCAPE ARCHITECTURE
PO BOX 4561 STOCKTON, CA 95204
TELEPHONE 209.948.2081

| REVISIONS | | |
|-----------|------------------------------------|---------|
| NO. | DESCRIPTION | DATE |
| 1 | ADD MAIN LINE VALVE PER CORPS REQ. | 8/17/10 |
| 2 | TRENCH SECTION | 8/17/10 |

DISCHARGE PIPE REPLACEMENT
PLAN, PROFILE, DETAILS & NOTES
VENETIAN BRIDGES HOMEOWNERS ASSOCIATION
5345 N. EL DORADO ST. SUITE 8
STOCKTON, CA 95207

| | |
|---------|---------|
| JOB NO. | 10-02 |
| DATE | 5/20/10 |
| DESIGN | LLT |
| DRAWN | LLT |
| CHECKED | LLT |

SHEET

C-2

OF 2 SHEETS